collections of stem cells and autologous therapeutic cells rose by 23% to an all time high of 106 collections in one month. The average number of individual patients per week rose from 8.7 (standard deviation 2.4) to 11.2 (standard deviation 1.8). Nursing safety standards were not exceeded, and management involvement in resolving scheduling conflicts dropped from two requests per week to one in two months.
Conclusion: By changing apheresis scheduling method to day one scheduling only, we were able to increase throughput without having to make any additional adjustments to resources. The clearer format resulted in increased staff satisfaction with the scheduling process. This change represented a paradigm shift from previous scheduling models, and has yielded a major improvement in use of resources. Additionally, it provides a dynamic tool to support evaluation of facility utilization to meet future demand.

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DEVELOPMENT AND IMPLEMENTATION OF A TRANSPLANTATION WORKFLOW INFORMATION SYSTEM, ALLOWING REAL TIME ANALYSIS OF WORK FLOW AND WORK LOAD, AND IMMEDIATE REPORTING CAPABILITIES

Yatawara, M.S., Hoshal, K.W., Lynn, A., Franco, M., Van Strien, P., Guerrero, M., Snoussi, L., Gharapetian, S.M., Lim, S., Lill, M. Cedars--Sinai Medical Center, Los Angeles, CA

Background: Coordination of care and improving efficiency of delivery of care for transplant patients is a challenge for every transplant program. This problem will become even more acute as the number of transplant patients increases, while the work force remains constant. We developed a Transplant Information Patient System (TIPS) in order to streamline management of patients in the pre and post transplant phases of care, and improve the quality of data for reporting purposes.
Methods: TIPS is a HIPAA compliant relational database incorporating a split database architecture; a MySQL back-end database and a MS Access front-end. TIPS is easily installed on workstations via downloading front-end from a network Share and connecting via ODBC to the back-end MySQL database.

Data on all prospective transplant patients are entered into TIPS. TIPS assigns each patient a specific workflow status (see Table 1). Within the Active patient status, patients are further classified into separate clinic status. The system Dashboard enables BMT Program Administrators to view a graphical representation of the status of all patients admitted to the program. Administrators can analyze existing workloads of all care providers and re-distribute high or low workloads as needed. Detailed transplant data capture and reports functionality allows for ease of RFI reporting. Medical information includes automated calculation of comorbidity index, staging of patient, performance status and other clinically relevant data points.Implementation of TIPS in the BMT Program has enabled:

- Real-time review and discussion of patients in respective workflow status
- Enhanced tracking of clinically relevant time-points for allogeneic transplants
- Timely reports generation for internal and external data reporting
- Increased tracking of patient outcomes for programmatic and quality improvement issues

Conclusion: TIPS is an efficient workflow tool that enables increased direct patient care interactions and more accurate patient data collection and reporting. Our BMT Program now has a direct overview of our patient volume and which phase of the transplant process each patient is in. This enables us to identify bottlenecks, enhance communication, improve quality and maximize efficiency of our staff.

We are in the process of converting the interface to a web based system, which will enable more access to other staff in other areas of the program.

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THE JOURNEY FROM NOVICE TO EXPERT: CREATION OF A COMPREHENSIVE, SUSTAINABLE EDUCATIONAL PROGRAM FOR HEMATOPOIETIC CELL TRANSPLANT (HCT) ADVANCED PRACTICE PROFESSIONALS (APP)

Stehr, B.J.[1], Seerup, J.L.[2], Reyes, J.K.[3 1] City of Hope, Duarte, CA

Background: The City of Hope Hematopoietic Cellular Transplantation (HCT) Program's care delivery system relies heavily on the role of the Advanced Practice Professional (APP). A comprehensive educational program, to include initial orientation and continuing competency development, was lacking. This abstract will discuss the development and implementation of a comprehensive educational program for both newly recruited and seasoned APPs.
Methods: To assess the current knowledge base and clinical competency of the APPs, several strategies were utilized. These strategies included distribution of a needs assessment, peer review, physician evaluation of the APP and comprehensive chart audits. In addition, a literature review and benchmarking with like-institutions was conducted.
Results: 18 HCT APPs were surveyed. The needs assessment identified theoretical, practical, and technical areas for future learning. Review of the literature and benchmarking efforts gleaned minimal relevant information regarding APP specific education in HCT Programs.
Interventions: Orientation Program: A comprehensive orientation program based upon theoretical learning requirements, clinical exposure with consulting specialties, and procedural skill development for new HCT APPs was implemented. Supporting orientation tools and content were also developed, as was a repository for their storage and retrieval.

Continued Learning Program: A process for an annual needs assessment was established to identify future APP learning needs. Educational forums focused on the needs assessment data were scheduled at set intervals over the course of the year. An already established monthly Journal Club was also utilized to present topics of interest. In addition, impromptu training occurred for immediate learning needs, as identified during chart and procedural audits.
Conclusions: Increased collaboration across HCT Programs is essential for sharing of clinical best practices. In addition, comprehensive HCT APP educational strategies should be included in the literature to support and inform the growing needs of HCT APPs roles.

Table 1. Patient Workflow Status Assigned in TIPS

	BMT Program					
Patient Status:	INTAKE: Status of patient when first presented at BMT Meeting for evaluation (decision to transplant pending)	ACTIVE: Patient accepted into Program - File is Active - Patient discussed regularly	ACTIVE	ACTIVE	ACTIVE	INACTIVE: Patient Accepted into Program - File is Inactive - Patient NOT discussed
Clinic Status:	INTAKE-NEW: New patient - Transplant decision pending INTAKE-RE-TRANSPLANT: Re-transplant patient - Transplant decision pending	PRE-TRANSPLANT: Patient is in pre-transplant work-up stage (work-up eval. studies, insurance auth., stem cell mobilization and collection)	ADMIT/PREP REGIMEN: Patient scheduled for admission OR is admitted and is receiving preparative therapy	POST-TRANSPLANT: Patient has been transplanted and is under daily care	DISCHARGE/ FOLLOW-UP: Patient discharged from hospital and in follow-up stage	DISCHARGE/ FOLLOW-UP